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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,195	05/20/2004	Karl M. Gutttag	KAGU-0002-UTY	7299
22506	7590	11/23/2004	EXAMINER	
JAGTIANI + GUTTAG 10363-A DEMOCRACY LANE FAIRFAX, VA 22030			DHARIA, PRABODH M	
			ART UNIT	PAPER NUMBER
			2673	

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/849,195

Applicant(s)

GUTTAG ET AL.

Examiner

Prabodh M Dharja

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 16-168 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05-20-2004
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Priority

1. It is noted that this application appears to claim subject matter disclosed in prior Application No. 60/471,731, filed on 05-20-2003 and 60.568,253 filed on 05-06-2003. A reference to the prior application has been inserted as the first sentence of the specification of this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Rushing (6,229,972 B1).

Regarding Claim 1, Rushing teaches a device (Col. 1, Lines 5-10) comprising: electrode means comprising at least one electrode (Col. 5, Line 4,5) for controlling (Col. 5, Line 6, Col. 4, Lines 43-51) a light modulating element of an array (Col. 4, Lines 35,36) of light modulating elements (Col. 4, Lines 36-40); and recursive feedback control means (Col. 10, Lines 38-54, Col. 8, Lines 8-45) for controlling at least one pulse width using recursive feedback, said pulse width driving said electrode means (Col. 5, Line 4-6, Col. 4, Lines 43-51, Col. 10, Lines 38-54, Col. 8, Lines 8-45).

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Regarding Claim 2, Rushing teaches recursive feedback is based on an output bit (Col. 8, Lines 8-27).

Regarding Claim 3, Rushing teaches output bit is a drive output bit 4 (Col.8, Lines 26-53, Col.10, Lines 17-27).

Regarding Claim 4, Rushing teaches output bit is an intermediate output bit (Col.8, Lines 26-53, Col.10, Lines 17-27).

Regarding Claim 5, teaches device includes a backplane and wherein said backplane includes said recursive feedback control means.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rushing (6,229,972 B1) in view of Van Dijk (4,847,854).

Regarding Claim 6, Rushing teaches a device (Col. 1, Lines 5-10) comprising: electrode means comprising at least one electrode (Col. 5, Line 4,5) for controlling (Col. 5, Line 6, Col. 4,

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Lines 43-51) a light modulating element of an array (Col. 4, Lines 35,36) of light modulating elements (Col. 4, Lines 36-40).

However, Rushing fails to teach device includes a panel interface controller and wherein said panel interface controller includes said recursive feedback control means

However, Van Dijk teaches device includes a panel interface controller and wherein said panel interface controller includes said recursive feedback control means (Col. 4, Lines 32-38, 44-51, Col.11, Lines 4-6, Col. 14, lines 51-56, Col. 15, Lines 13-16, Lines 63-68, Col. 16, lines 17-21).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Van Dijk in to the teaching of Rushing to be able reduce the electronic noise and since recursive feedback control based upon all data entered it minimizes storage requirement.

Regarding Claim 7, Van Dijk teaches electrode means comprises at least two electrodes (Col. 2, Lines 10-15).

Regarding Claim 8, Rushing teaches array of light modulating elements is part of a visual display apparatus (Col. 3, Lines 40-43, Col. 9, Lines 55-63, Col. 10, Lines 17-27, Col. 12, Lines 19-23).

Van Dijk teaches a visual display apparatus including said array of light modulating elements (Col. 16, Lines 58-60, Col. 17, Lines 10-14, 18-20, Lines 31-41, Col. 28, Lines 8-13).

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Regarding Claim 9, Van Dijk teaches array of light modulating elements on a single silicon backplane (Col. 4, Lines 32-38, 44-51, Col.11, Lines 4-6, Col. 14, lines 51-56, Col. 15, Lines 13-16, Lines 63-68, Col. 16, lines 17-21).

Regarding Claim 10, Rushing teaches recursive feedback is explicit (Col. 5, Line 4-6, Col. 4, Lines 43-51, Col. 10, Lines 38-54, Col. 8, Lines 8-45).

Regarding Claim 11, Van Dijk teaches recursive feedback is implicit (Col. 4, Lines 32-38, 44-51, Col.11, Lines 4-6, Col. 14, lines 51-56, Col. 15, Lines 13-16, Lines 63-68, Col. 16, Lines 17-21).

Regarding Claim 12, Van Dijk teaches pulse width comprises at least two pulse widths (Col. 4, Lines 64-67, Col. 5, lines 15-18, Col. 14, Lines 51-56, Col. 15, Lines 13-16, 47-68, Col. 16, lines 17-21).

Regarding Claim 13, Rushing teaches device include a plurality of pixel value bits for controlling a pixel value of said pulse width and wherein said recursive feedback control means only uses some of said pixel value bits to determine a next state of said pulse width (Col. 3, Lines 40-43, Col. 9, Lines 55-63, Col. 10, Lines 17-27, Col. 12, Lines 19-23, Col. 5, Line 4-6, Col. 4, Lines 43-51, Col. 10, Lines 38-54, Col. 8, Lines 8-45).

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Van Dijk teaches pulse width comprises at least two pulse widths (Col. 4, Lines 64-67, Col. 5, lines 15-18, Col. 14, Lines 51-56, Col. 15, Lines 13-16, 47-68, Col. 16, lines 17-21, Col. 27, Lines 20-25).

Regarding Claim 14, Rushing teaches a visual display apparatus including said array of light modulating elements (Col. 3, Lines 40-43, Col. 9, Lines 55-63, Col. 10, Lines 17-27, Col. 12, Lines 19-23).

Van Dijk teaches a visual display apparatus including said array of light modulating elements (Col. 16, Lines 58-60, Col. 17, Lines 10-14, 18-20, Lines 31-41, Col. 28, Lines 8-13).

Allowable Subject Matter

6. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is an examiner's statement of reasons for allowance:

a device comprising: electrode means comprising at least one electrode for controlling a light modulating element of an array of light modulating elements; and recursive feedback control means for controlling at least one pulse width using recursive feedback, said pulse width driving said electrode means and array of light modulating elements is part of a visual display apparatus; and said visual display apparatus is an LCOS device; wherein said visual display apparatus includes pH indicating means indicating when a liquid crystal

and/or the environment surrounding said liquid crystal of said visual display apparatus is damaged.

Cited references on 892's fails to anticipate individually as well as render obviousness individually or in combination bold and underlined claimed above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is informed that all of the other additional cited references either anticipate or render the claims obvious. In order to not to be repetitive and exhaustive, the examiner did draft additional rejection based on those references.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lu et al. (5,414,623) Opto-electronic system for implementation of iterative computer tomography algorithms.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M Dharia whose telephone number is 703-605-1231.

The examiner can normally be reached on M-F 8AM to 5PM.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703-3054938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

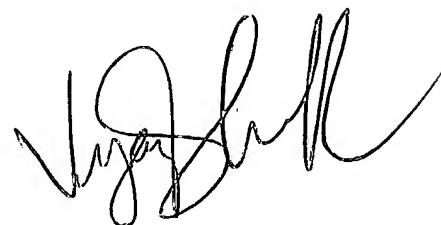
Commissioner of Patents and Trademarks

Washington, D.C. 20231

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November 15, 2004

A handwritten signature in black ink, appearing to read 'Vijay Shankar', is written over a light gray grid background.

**VIJAY SHANKAR
PRIMARY EXAMINER**